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# Studying (socially stratified?) variation in the Edinburgh Phonetics Recording Archive

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## INTRODUCTION

### The challenge of studying Edinburgh speech

- Described as similar to Glaswegian (Hughes et al., 2012) but challenging due to considerable socially stratified variation (Johnston, 1984; Chirrey, 1999)
- Chirrey (1999): "Edinburgh can be described in general as more middle-class than Glasgow, and thus Edinburgh speakers are on the whole more oriented towards standard varieties than their Glasgow counterparts" (428)



- If *Secondary School (Fee-paying vs. State)* is one definition of social class, can it account for variation?

## MATERIALS & METHODS

### Edinburgh Phonetics Recording Archive

- Contains over 700 recordings of 'Arthur the Rat' passage recorded between 1949-1966
- First pass: 49 speakers (39 Edinburgh, 7 Glaswegian, 3 Cambridge), ages 18-65 at time of recording
- All students at Edinburgh University at time of recording
- Semi-supervised segmentation using MAUS (Munich Automatic Segmentation) system (Schiel et al., 2011)

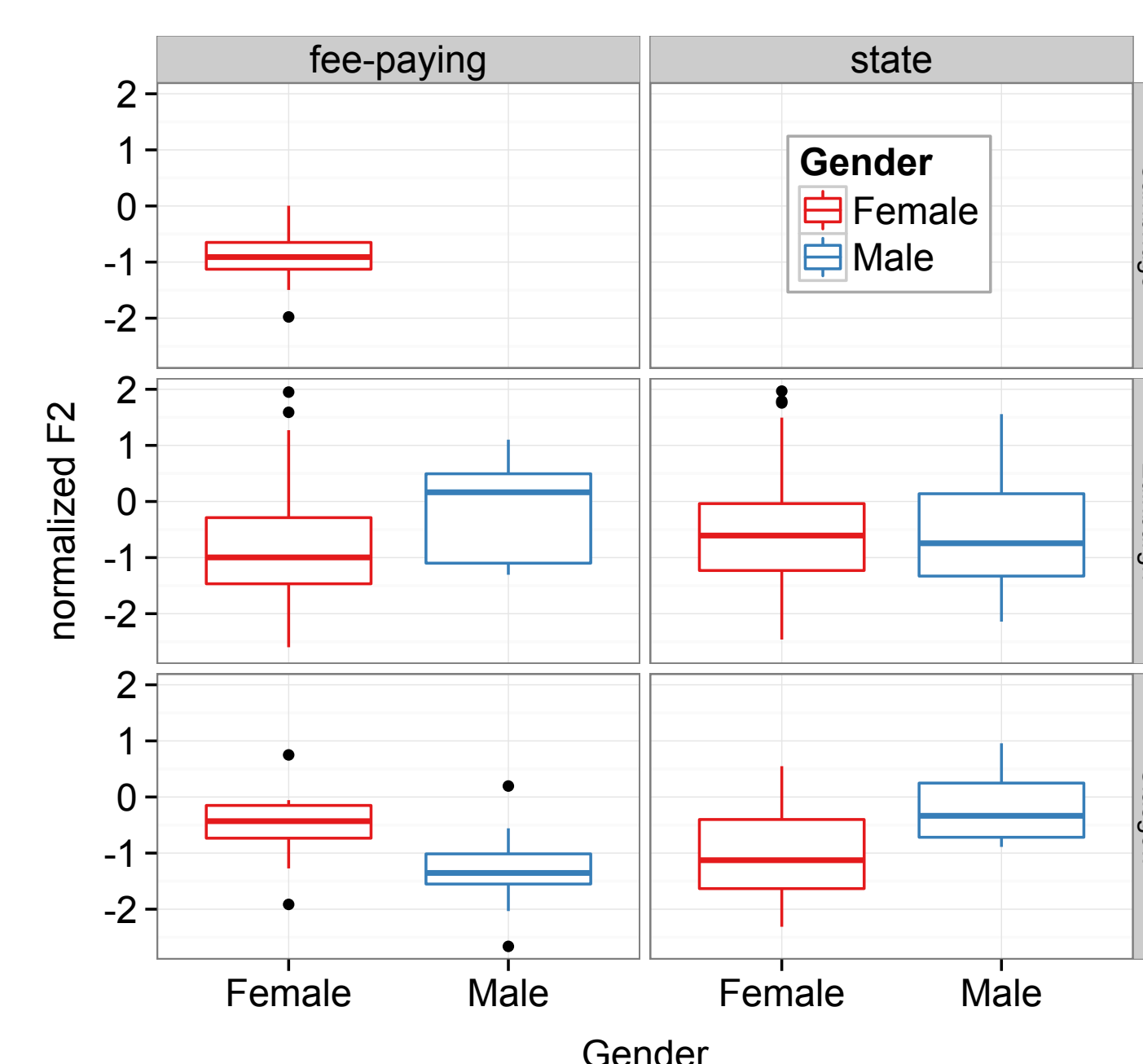


- Subsequent formant analysis of 14,000+ vowel tokens using Praat
- Measured at 5 timepoint and smoothed using method of Xu (1999)
- Archive metadata contains extensive demographic information

## CASE STUDY: GOOSE-fronting

### Evidence for fronting/lowering?

- /u/-fronting observed in SSBE (Harrington et al. 2011, Chládková & Hamann 2011), and many other varieties of English across the world.
- Potentially different in Scotland: more centralized/lowered (Scobbie et al. 2011) and less advanced (Stuart-Smith et al. 2012), possibly retreating from a fronted variant.
- Our data: moderate fronting, no obvious lowering vis-à-vis Cambridge ----->

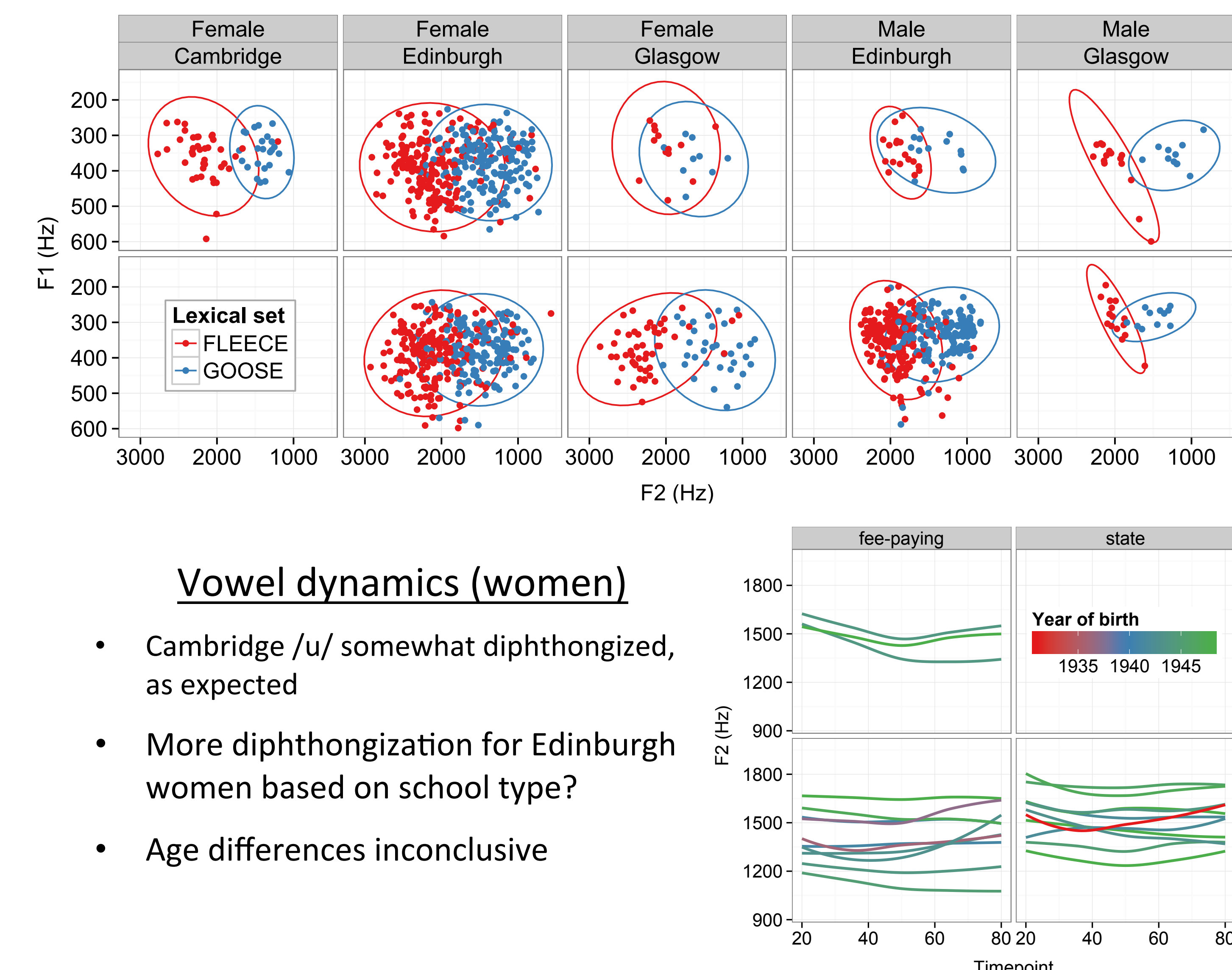
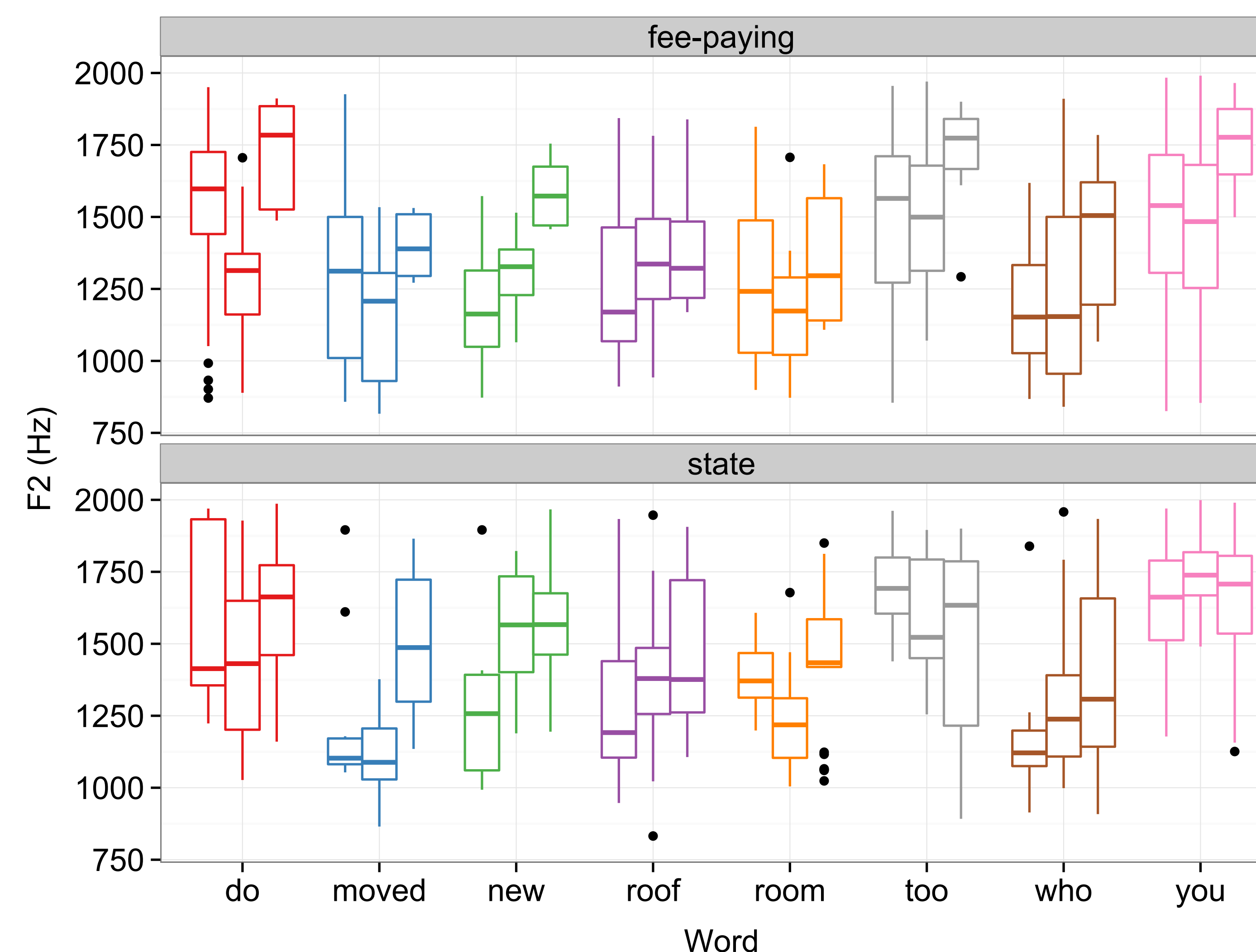


### Steady-state F2

- Edinburgh males may have slightly fronter /u/
- Little difference between Edinburgh school types.
- Cf. Glasgow school types, esp. fee-paying males

### By-word comparisons, by year-of-birth cohort (oldest to youngest)

- STATE-EDUCATION: Post-coronal /u/s (e.g. *do, too, you*) show less change in apparent time, while others trend towards fronting over time.
- FEE-PAID EDUCATION: Overall, less monotonic fronting for either category; only *new* and *who* show probable fronting effects over time.
- STATE-EDUCATED speakers also show more fronting, consistent with finding that Upper Working Class / Lower Middle Class tend to lead sound change.



### Vowel dynamics (women)

- Cambridge /u/ somewhat diphthongized, as expected
- More diphthongization for Edinburgh women based on school type?
- Age differences inconclusive

## DISCUSSION

- All university students! 1950s/60s, RP=high prestige.
  - Consider *class mobility* (Dickson & Hall-Lew)
  - Consider *class aspiration* (Wagner 2012, 2014)
  - Consider variation *within* class (Lawson 2011)
- The archive may not be suitable to the question.

## CONCLUSIONS

- Challenges of automated analysis
- Re-use of archival data:
  - Major demographic imbalances in the sample.
  - Some missing year-of-birth information.
  - Social homogeneity, perhaps.
- Next: comparisons with contemporary Scottish speech (e.g. Schützler 2013, Sounds of the City, VOYS project...)

